IN THE CLAIMS

Please cancel claims 7 and 13 without prejudice or disclaimer, and amend claims 1, 4, 9 and 11, as follows:

1. (Currently Amended) A key signal scanning apparatus of a complex telephone operated by using external power and by using a loop voltage when the external power is not supplied, said apparatus comprising:

a keypad having row ports, column ports, and keys for outputting a key signal in accordance with pressing of a key by a user;

a main microprocessor having row output ports and column input ports, and which operates by the external power for supplying a timing signal to the row ports of the keypad by using the row output ports, [[for]] said main microprocessor receiving the key signal from the column ports of the keypad by using the column input ports, [[for]] detecting the key pressed by the user by scanning the received key signal, and [[for]] outputting a first dialing signal corresponding to the detected key;

a sub microprocessor which operates when the external power is not supplied for outputting a second dialing signal according to the key signal from the keypad, the sub microprocessor having row ports and column ports;

a first separator circuit for cutting off current flow to the row output ports of the main microprocessor from the row ports of the sub microprocessor; and

a second separator circuit for cutting off current flow to the column ports of the

sub microprocessor from the column input ports of the main microprocessor when the external power is not supplied.

2. (Original) The key signal scanning apparatus of claim 1, further comprising a third separator circuit for cutting off current flow to the column ports of the sub microprocessor from the column ports of the keypad when the external power is supplied.

3. (Original) The key signal scanning apparatus of claim 2, wherein the third separator circuit comprises resistance elements connected to each column port of the keypad and to each column port of the sub microprocessor.

4. (Currently Amended) The key signal scanning circuit of claim 2, wherein the second separator circuit has an output connected to the column ~~inputs~~ input ports of the main microprocessor, and an input connected to both the column ports of the keypad and a first side of the third separator circuit, a second side of the third separator circuit being connected to the column ports of the sub microprocessor.

5. (Original) The key signal scanning circuit of claim 1, wherein the first separator circuit comprises diode elements having anode terminals connected to respective row output ports of the main microprocessor, and having cathode terminals connected to respective row ports of the keypad.

6. (Original) The key signal scanning apparatus of claim 1, wherein the second separator circuit comprises bipolar transistor elements having emitter terminals connected to respective column input ports of the main microprocessor, and having collector terminals connected to respective column ports of the keypad.

Claim 7. (Canceled)

8. (Original) The key signal scanning apparatus of claim 1, wherein the first separator circuit has an input connected to the row output ports of the main microprocessor, and an output connected to both the row ports of the sub microprocessor and the row ports of the keypad.

9. (Currently Amended) A key signal scanning apparatus of a complex telephone operated by using external power and by using a loop voltage when the external power is not supplied, said apparatus comprising:

a keypad having row ports, column ports, and keys for outputting a key signal in accordance with pressing of a key by a user;

a main microprocessor <u>having row output ports and column input ports, and</u> which operates by the external power for supplying a timing signal to the row ports of the keypad by using <u>the</u> row output ports, [[for]] <u>said main microprocessor</u> receiving the key

signal from the column ports of the keypad by using the column input ports, [[for]] detecting the key pressed by the user by scanning the received key signal, and [[for]] outputting a first dialing signal corresponding to the scanned key;

a sub microprocessor which operates when the external power is not supplied for outputting a second dialing signal according to the key signal from the keypad, the sub microprocessor having row ports and column ports;

a first separator circuit for cutting off current flow to the column ports of the sub microprocessor from the column input ports of the main microprocessor when the external power is not supplied; and

a second separator circuit for cutting off current flow to the column ports of the sub microprocessor from the column ports of the keypad when the external power is supplied.

10. (Original) The key signal scanning apparatus of claim 9, wherein the second separator circuit comprises resistance elements connected to each column port of the keypad and to each column port of the sub microprocessor.

11. (Currently Amended) The key signal scanning apparatus of claim 9, wherein the first separator circuit has an output connected to the column ~~inputs~~ input ports of the main microprocessor, and an input connected to both the column ports of the keypad and a first side of the second separator circuit, a second side of the second separator circuit

being connected to the column ports of the sub microprocessor.

12. (Original) The key signal scanning apparatus of claim 9, wherein the first separator circuit comprises bipolar transistor elements having emitter terminals connected to respective column input ports of the main microprocessor, and having collector terminals connected to respective column ports of the keypad.

Claim 13. (Canceled)